

SASOL

Industrial Waxes

Paper & Packaging

Sasol Performance Chemicals



About us

Sasol's Performance Chemicals business unit markets a broad portfolio of organic and inorganic commodity and speciality chemicals. Our business employs about 1300 people in four key business divisions: Organics, Inorganics, Wax and PCASG (Phenolics, Carbon, Ammonia and Speciality Gases). Our offices in 18 countries serve customers around the world with a multi-faceted portfolio of state-of-the-art chemical products and solutions for a wide range of applications and industries.

Our key products include surfactants, surfactant intermediates, fatty alcohols, linear alkyl benzene (LAB), short-chain linear alpha olefins, ethylene, petrolatum, paraffin waxes, synthetic waxes, cresylic acids, high-quality carbon solutions as well as high-purity and ultra-high-purity alumina. Our speciality gases sub-division supplies its customers with high-quality ammonia, hydrogen and CO₂ as well as liquid nitrogen, liquid argon, krypton and xenon gases.

Our products are as individual as the industrial applications they serve, with tailor-made solutions creating real business value for customers. Ongoing research activities result in a continuous stream of innovative product concepts that help our customers position themselves successfully in future markets.

Our products are used in countless applications in our daily lives to add value, security and comfort. Typical examples include detergents, cleaning agents, personal care, construction, paints and coatings, leather and metal processing, hot-melt adhesives, bitumen modification and catalyst support for automotive catalysts and other diverse specialty applications including oil and gas recovery, aroma production, plastic stabilisation, and polymer production. Every day, our researchers explore ways to improve our products and develop innovations that improve the quality of people's lives.



At a glance

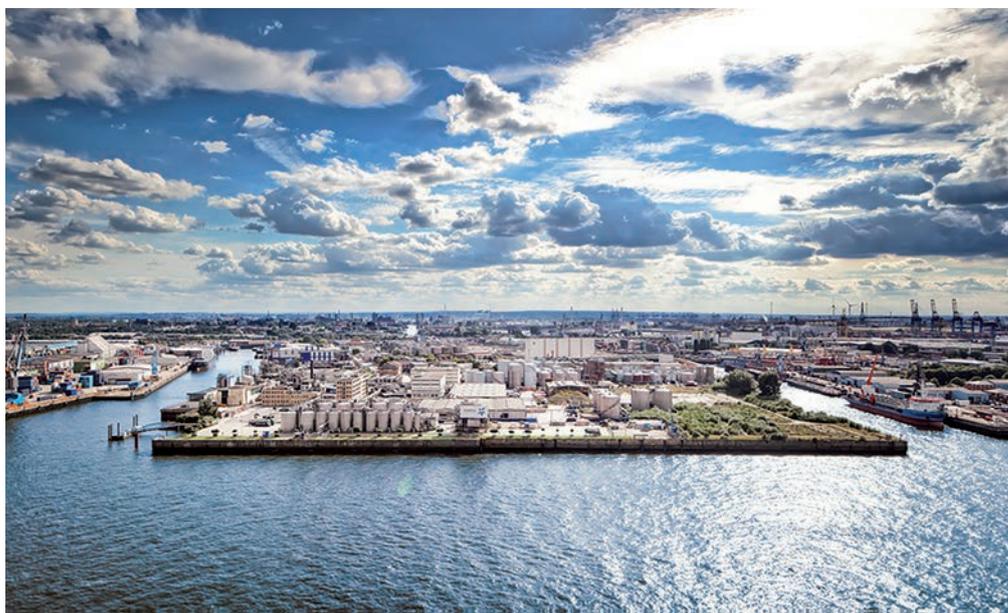
The Wax Division of Sasol Performance Chemicals is the leading specialist in innovative wax technology.

For many decades the Wax Division of Sasol Performance Chemicals has focussed on the development and sales of paraffin waxes, micro waxes, synthetic waxes and blends or emulsions thereof. Today we serve different industries like inks, paints & coatings, rubber & tire, paper & packaging, textiles, cosmetics as well as road construction, candles and many others.

Micro and macro crystalline waxes are renowned for a wide range of possible applications. Their use ranges from rather simple applications to process oriented tailor-made blends for state of the art production equipment. Specialties are created for innovative solutions.

Refined paraffin waxes are blends of saturated hydrocarbons, purified by modern, environmental friendly technologies. All our products are constantly monitored by a stringent quality control system and are nontoxic. Their environmental properties are characterized by good biodegradability and non-cumulative effects.

Wax solutions for every process.



Paper & Packaging

Paper and paper board are superior materials for packaging applications. This is because they are more resilient and economically viable than glass, plastics or metal. However, they exhibit only limited barrier properties for moisture, water, gases and odour. To enhance these properties paper products can be coated with waxes or laminated to plastic films or foils. Sasol Performance Chemicals is able to offer a wide range of paraffin, microcrystalline and Fischer-Tropsch waxes suited to impregnate, laminate or coat different paper stocks. Our wax coatings for food packaging conform to the rules and regulations set out by both the „Bundesinstitut für Risikobewertung“ (BfR) and the Food and Drug Administration (FDA).

HydroWax emulsion

HydroWax emulsions are finely dispersed wax particles in water with a mean diameter of only a few microns. The products are commonly used for paper sizing. Internal sizing is performed by adding the emulsion directly to the stock at the wet end of the paper machine. This results in enhanced paper properties such as increased wet strength and a decreased propensity to linting. In many cases internal sizing with wax emulsions increases the efficiency of a following size press application.

	Water Content [%]	Viscosity typical [mPa • s]	pH	Emulsifier
HydroWax 215	52 - 56	500	7.0	Anionic
HydroWax RV	48 - 52	1000	7.0	Anionic
HydroWax 46	38 - 42	300	7.5	Cationic

Coating waxes for flexible packaging

A variety of waxes can be offered for food packaging applications like papers for creams, meat and fruits or wrappers for candies and sweets as well as for various technical applications. They are usually made from fully refined paraffin or microcrystalline waxes as well as mixtures thereof. Paper coated with these waxes show enhanced barrier properties against moisture and odour. Additionally, due to the low viscosity of the waxes, low coating weights can be achieved.

	Congealing Point [°C]	Penetration at 25°C [1/10 mm]	Oil Content [%]
Sasolwax 1357*	56 - 58	22 - 26	0.8 - 1.5
Sasolwax 4110	60 - 62	13 - 16	0 - 0.5
Sasolwax 4610	46 - 49	40 - 80	0 - 2
Sasolwax 5603	56 - 58	15 - 19	0 - 0.5
Sasolwax 5803	58 - 60	15 - 19	0 - 0.5
Sasolwax 6403	62 - 66	16 - 22	0 - 0.5

* Not intended for food contact.



Sasol Performance Chemicals is able to offer a wide range of waxes suited to impregnate, laminate or coat different paper stocks.

Technical Data

Coating waxes for more gloss and improved barrier properties

Bespoke properties can be obtained depending on the selection of the wax blends. These blends exhibit exceptional barrier properties against water odour and fat, increased abrasion resistance and feature an enhanced glossy appearance. Depending on the formulation, abrasion resistance and viscosity can be adjusted individually. Gloss waxes are mainly used for edibles like sweets, candy, meat, sandwich and vegetables as well as dairy products like cheese. Other papers may also be upgraded in function and design.

	Congealing Point [°C]	Penetration at 25°C [1/10 mm]	Viscosity at 100 °C [mm ² /s]
Sasolwax 7579	70 - 80	11 - 13	40 - 50
Sasolwax 7853	75 - 85	8 - 14	110 - 130
Sasolwax 7855	75 - 85	8 - 12	200 - 220

Coating waxes for gloss and sealing abilities

Coatings manufactured with these waxes exhibit higher strength and hence abrasion resistance as well as an improved gloss impression. These special formulations are based on waxes and a variety of different additives. They are used to coat all different kinds of paper and board, which are used for a variety of packaging applications like bread wrappers, ice cream cones and chewing gum. Paper and coated board with higher basis weights are key raw materials for the manufacture of disposable plates and soap wrappers as well as packaging for frozen food. In addition to the improved barrier property here the wax acts as a release agent.

Sasolwax 1276	64 - 68	8 - 13	600 - 700
Sasolwax 5870	60 - 70	10 - 20	105 - 115
Sasolwax 5883	64 - 66	12 - 15	58 - 63
Sasolwax 7513	85 - 95*	5 - 15	500 - 600**

* Drop melting point
** at 150 °C

Laminating waxes

Sasolwax laminating waxes are used to bond different substrates to each other to form a composite material. These composites used in packaging applications exhibit superior barrier properties against moisture and fatty materials. Base materials for these laminates are typically paper, aluminium and plastic foils as well as parchment and parchment substitutes. Sasolwax laminating waxes are tailor made for different base materials and can be used for inductive cap sealing. The final products are used for butter, margarine, cheese, yeast, bullion cubes, chocolate and many more.

Sasolwax 6908	65 - 72	30 - 45	15 - 25
Sasolwax 6909	65 - 75	30 - 45	33 - 43





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